Altitude™ 4511 Access Point Installation Guide

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1 Introduction

CHAPTER

The Altitude™ 4511 Access Point links wireless 802.11a/b/g/n devices to the controller, enabling the growth of your wireless network with a cost-effective alternative to standard Access Points.

The Altitude 4511 Access Point is an enterprise class 802.11n Access Point, installed in minutes anywhere a CAT-5 (or better) cable is located. The Altitude 4511 Access Point's mechanical design is optimized for installation over a standard CAT-5 (or better) wall jack. The AP does not protrude into the wall cavity, allowing for an efficient heat transfer and a universal installation over a standard Telco wiring plate. The Altitude 4511 Access Point's modular design allows the end-user to add switched Ethernet ports as-needed, and attach a standard keystone or Leviton QuickPort® modular connector to the wall plate.

The Altitude 4511 Access Point ships with a single dual-band radio supporting the 802.11a/b/g/n radio bands.

The Altitude 4511 Access Point receives all power and transfers data through the same CAT-5 or better Ethernet cable. There is no additional power supply required. An 802.113af Ethernet switch or an Extreme Networks Summit® WM3400 or Summit WM3600 model controller (both PoE capable) is required to power the Altitude 4511 Access Point.

Once cabled and powered, the Altitude 4511 Access Point can be set to function as either a Virtual Controller AP, Standalone AP or Dependent Mode AP. If set to function as a Standalone AP, the Access Point defines its own management configuration. If set to function as a Dependent Mode Access Point, the Altitude 4511 Access Point receives its configuration from its connected Summit WM3400, WM3600 or WM3700 controller or another Altitude 4511 Access Point in Virtual Controller AP Mode.

The Altitude 4511 Access Point can be ordered for US deployment (Part Number 15761), ordered for deployment in the European Union regulatory doman (Part Number 15782), or the rest of the world (Part Number 15762).

Document Conventions

The following graphical alerts are used in this document to indicate notable situations

NOTE

Tips, hints, or special requirements that you should take note of.

CAUTION

Care is required. Disregarding a caution can result in data loss or equipment malfunction.

WARNING!

Indicates a condition or procedure that could result in personal injury or equipment damage.

Warnings

- Read all installation instructions and site survey reports, and verify correct equipment installation before connecting the Altitude 4511 Access Point to its power source.
- Remove jewelry and watches before installing this equipment.
- Verify that the unit is grounded before connecting it to the power source.
- Verify any device connected to this unit is properly wired and grounded.
- Connect all power cords to a properly wired and grounded electrical circuit.
- Verify the electrical circuits have appropriate overload protection.
- Attach only approved power cords to the device.
- Verify the power connector and socket are accessible at all times during the operation of the equipment.
- Do not work with power circuits in dimly lit spaces.
- Do not install this equipment or work with its power circuits during thunderstorms or other weather conditions that could cause a power surge.
- Verify there is adequate ventilation around the device, and that ambient temperatures meet equipment operation specifications.

Site Preparation

- Consult your site survey and network analysis reports to determine specific equipment placement, power drops, and so on.
- Assign installation responsibility to the appropriate personnel.
- Identify and document where all installed components are located.
- Ensure adequate, dust-free ventilation to all installed equipment.
- Prepare Ethernet and console port connections.
- Verify cable lengths are within the maximum 100 meter allowable length.

Package Contents

- Altitude 4511 Access Point with internal (integrated) antennas
- Mounting plate (used for both wall mount and Telco Box installations)
- Mounting plate lock screw
- Altitude 4511 Access Point Installation Guide *(This Guide)*
- RJ-45 double plug interconnect cable
- Fast Ethernet port 1 interconnect cable

Features

- One RJ-45 PoE Ethernet port (built into the Altitude 4511 Access Point)
- Optional second RJ-45 Ethernet port utilizing a pass through (keystone) cable (included)
- Optional three port Ethernet expansion module (sold separately)
- 2 LED indicators

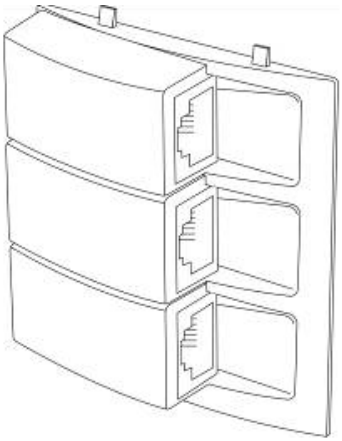
The pass through (keystone) cable provides an option to add a second Ethernet port before installing the Altitude 4511 Access Point.

The Altitude 4511 Access Point has one RJ-45 connector supporting a 10/100 Ethernet port and requires 802.3af compliant power from an external source.

The Altitude 4511 Access Point ships with a single dual-band radio supporting the 802.11a/b/g/n radio bands.

The Access Point contains runtime firmware which enables the unit to boot after either a power up or a watchdog reset. The runtime firmware on the Access Point can be updated via the Ethernet interface.

The front of the Altitude 4511 Access Point has an access cover that can be removed to expose an additional connector. A three port RJ-45 Ethernet expansion module connects to the hidden header and snaps onto the Altitude 4511 Access Point in place of the access cover.



Remove the Altitude 4511 Access Point's access cover by inserting a tool into the circular hole (opening) on the bottom of the Altitude 4511 Access Point. Pull the access cover up and away from the Altitude 4511 Access Point. Reverse the procedure to install the expansion module.

The Ethernet expansion module has three ports labeled FE2, FE3 and FE4.

The expansion module (Part Number KT-6511-0000D-WR) is a separately orderable component from Extreme Networks.

2 Hardware Installation

CHAPTER

Installation Instructions

An Altitude 4511 Access Point mounts either on a wall, under a table or over a Telco Box. The Altitude 4511 Access Point is not plenum rated.

NOTE

The provided metal mounting plate is fastened to an existing standard Telco in-wall box. The box is customer provided within the customer building structure, and can be either plastic or metal in composition. Screws and other mounting hardware are not included.

The Altitude 4511 Access Point is mounted to a wall or Telco Box so the mounting plate is flush with the mounting surface.

The Altitude 4511 Access Point snaps on to the mounting plate without the use of tools or fastening hardware. Removal of the Altitude 4511 Access Point from the mounting plate can be accomplished without the use of a tool. A mounting lock screw is provided to help ensure a tamper resistant installation.

NOTE

Once installed onto the mounting plate, the assembly can resist a minimum of 10 lbs of force before unit breakage or accidental disassembly.

To prepare for an Altitude 4511 Access Point installation, perform the following:

1 Verify the contents of the box includes the intended Altitude 4511 Access Point and accessory hardware.

2 Review site survey and network analysis reports to determine the location and mounting position for the Altitude 4511 Access Point.

3 Connect a CAT-5 or better Ethernet cable to a PoE compatible device and run the cable to the installation site. Ensure there is sufficient cable slack to perform the installation steps.

Precautions

Before installing an Altitude 4511 Access Point:

- Verify the intended Altitude 4511 Access Point deployment location is not prone to moisture or dust.
- Verify the environment has a continuous temperature range between 0° C to 40° C.

Access Point Placement

For optimal performance, install the Access Point away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators and other industrial equipment. Signal loss can occur when metal, concrete, walls or floors block transmission. Install the Access Point in an open area or add Access Points as needed to improve coverage.

To maximize the Access Point's radio coverage area, Extreme Networks recommends conducting a site survey to define and document radio interference obstacles before installing the Access Point.

Wall Mount Installation

To support wall mount installations, the metal mounting plate (provided with the Altitude 4511 Access Point) is fastened to a flat wall surface. The wall should be of gypsum board, plaster, wood or concrete in composition.

NOTE

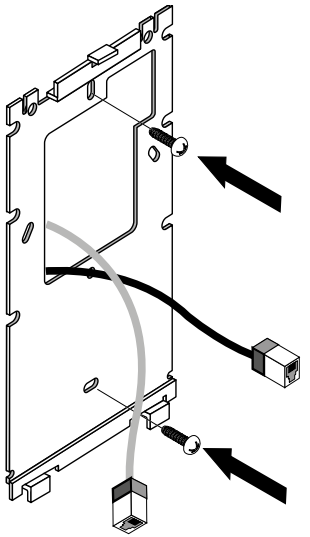
Extreme Networks recommends the following customer supplied mounting accessories for an Altitude 4511 Access Point wall mount installation:

2, screws, #6 x 2.00 inch pan head
2, wall anchors suitable for the #6 screws

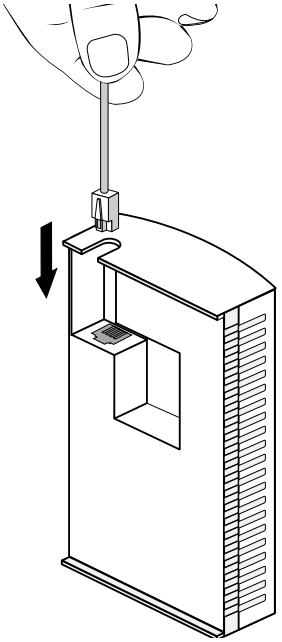
To install an Altitude 4511 Access Point to a wall surface:

1 Attach the metal mounting plate (shipped with the Altitude 4511 Access Point) to a wall surface at the desired deployment location.

The screws used to mount the bracket are customer provided and should be #6, with a 2.00 inch length.



2 Connect one end of an RJ-45 cable into the wall mount connector on the Altitude 4511 Access Point as illustrated below.



3 If using the optional second RJ-45 Ethernet port (utilizing a pass through keystone cable), ensure the following steps are completed:

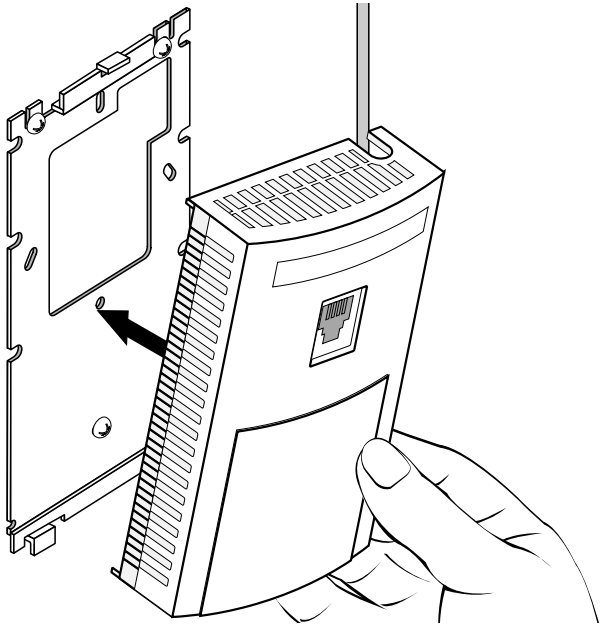
a Bend the cable into a "U" shape so the mini pin connector and the RJ-45 keystone cable are in close proximity to one another.

b Install the mini pin connector into the pin socket on the back of the Altitude 4511 Access Point. The connector is keyed and can only be installed one way. Ensure the mini pin connector is connected securely.

c Remove the blank plug from the keystone hole by gently pushing it out from the back.

d Orient the RJ-45 keystone connector so the flexible keystone tab is away from the mini pin connector. Tip the keystone RJ-45 while installing in the keystone opening so the solid locking tabs engage, then rotate the RJ-45 forward until the tab snaps securely.

4 Snap the Altitude 4511 Access Point on to the mounted wall plate. Use the locking screw to secure the unit. This connection does not require the use of tools or fastening hardware.



Once installed, connections are hidden from forward view, with only the physical infrastructure cables (Ethernet and power) extending from the Altitude 4511 Access Point.

5 Cable the Access Point using an 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller (both PoE capable):

a Connect an RJ-45 CAT5 Ethernet cable between the network data supply (host) and an 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller's LAN/PoE enabled Ethernet port.

b Connect an RJ-45 CAT5 Ethernet cable to the 802.113af Ethernet switch or the Summit WM3400 or WM3600 model controller's LAN/PoE enabled Ethernet port. Connect the other end of the Ethernet cable to the front of the Altitude 4511 Access Point.

c Ensure the cable length from the Ethernet source (host) to the 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller and Access Point does not exceed 100 meters (333 ft).

6 Verify the behavior of the Altitude 4511 Access Point LEDs. For more information, see "LED Indicators" on page 18.

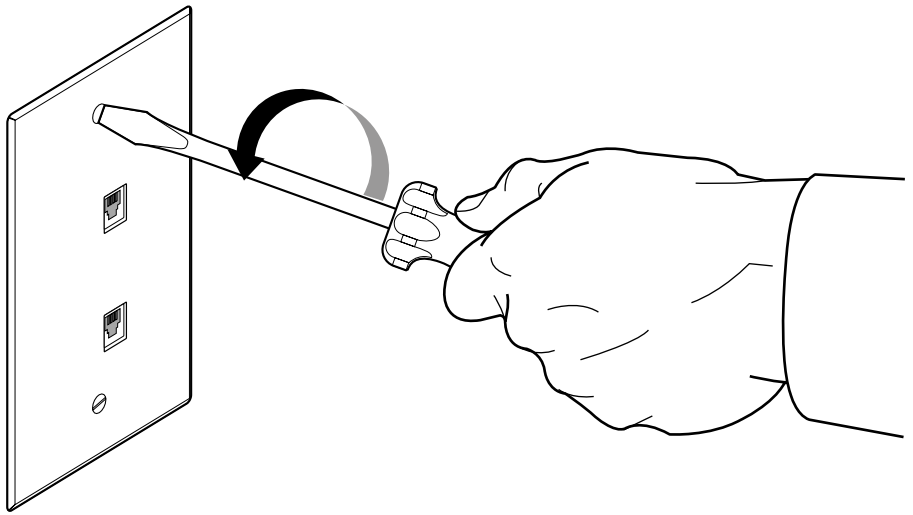
7 Once cabled and powered, the Altitude 4511 Access Point functions as either a Virtual Controller Access Point, Standalone Access Point or dependent mode Access Point, and receives its configuration once adopted by a Summit WM3400, WM3600 or WM3700 series controller or Altitude 4511 Access Point functioning in Virtual Controller mode. For information on using a controller to manage the Altitude 4511 Access Point, see: http://www.extremenetworks.com/go/documentation.

Telco Box Installation

For Telco Box installations, the Altitude 4511 Access Point is installed directly over the standard wall plate supplying Ethernet. All cabled electrical connections are mode within a recessed well in the housing of the Altitude 4511 Access Point.

To install the Altitude 4511 Access Point over a Telco Box:

1 Remove the cover of the CAT5 wall plate.



NOTE

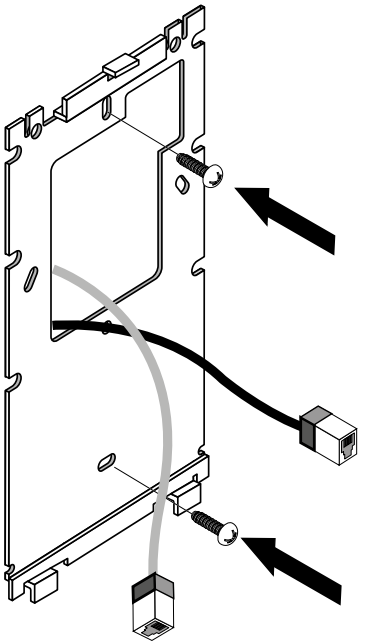
The example above assumes the Telco Box has a 1 RJ11 phonejack and 1 RJ-45 10/100 Ethernet connection.

2 Snap out keystone connectors from the existing plate.

3 Gently pull some cable out of the wall so it can be used with the Altitude 4511 Access Point.

4 Attach the metal mounting plate (shipped with the Altitude 4511 Access Point) to an existing standard Telco in-wall box.

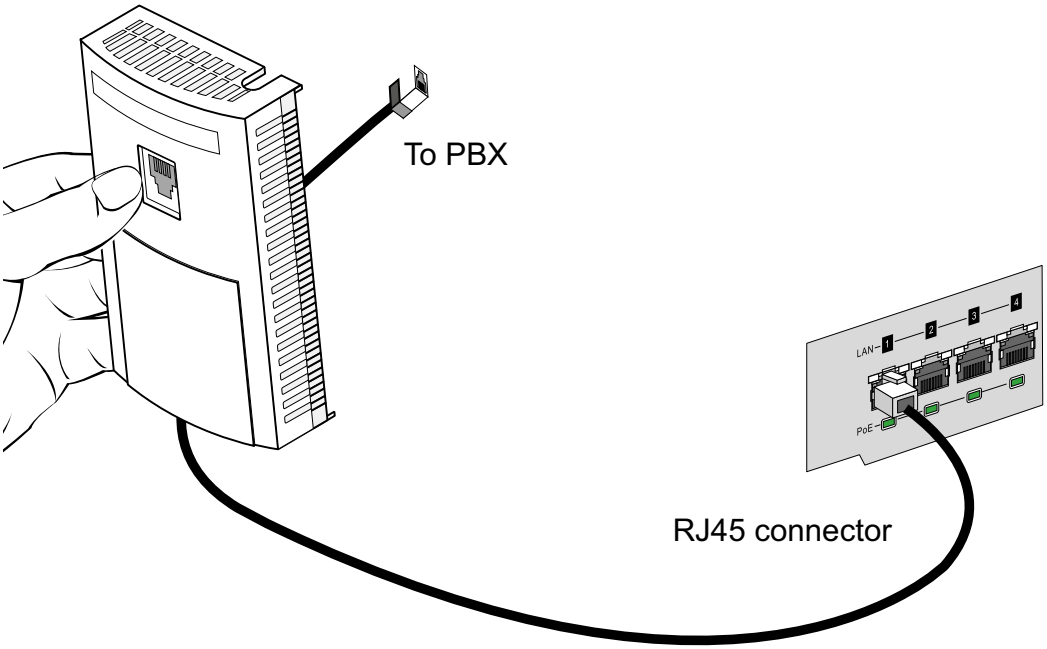
The screws used to mount the bracket to the Telco Box are customer provided. You can use the same screws that covered the existing wall plate if necessary.



Mount the bracket to the wall so the Telco Box is hidden behind the mounting plate.

5 Remove the blank plug before installing the RJ11 into the snap-in port.

6 Install the RJ11 (keystone style) connector into the Altitude 4511 Access Point's snap-in port.

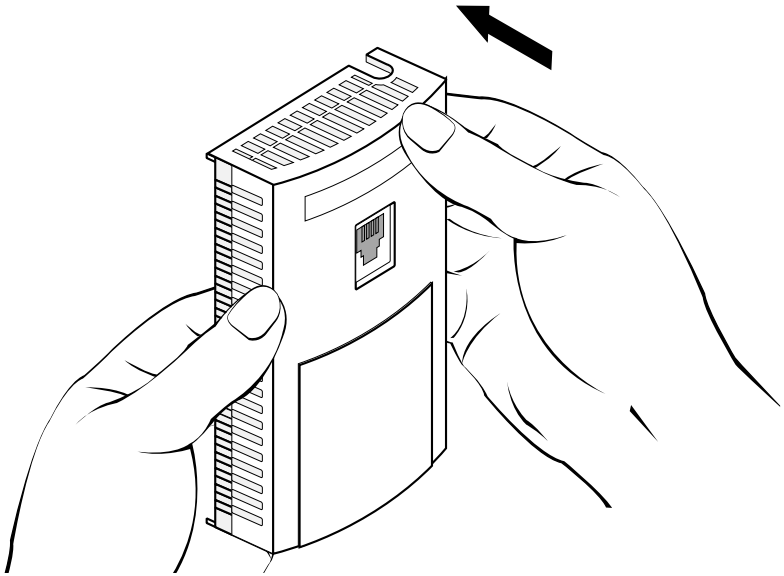


7 If using the optional second RJ-45 Ethernet port (utilizing a pass through keystone cable), ensure the following steps are completed:

- **a** Bend the cable into a "U" shape so the mini pin connector and the RJ-45 keystone cable are in close proximity to one another.
- **b** Install the mini pin connector into the pin socket on the back of the Altitude 4511 Access Point. The connector is keyed and can only be installed one way. Ensure the mini pin connector is connected securely.
- **c** Remove the blank plug from the keystone hole by gently pushing it out from the back.
- **d** Orient the RJ-45 keystone connector so the flexible keystone tab is away from the mini pin connector. Tip the keystone RJ-45 while installing in the keystone opening so the solid locking tabs engage, then rotate the RJ-45 forward until the tab snaps securely.

8 Install the RJ-45 double plug uplink jumper into the UP1/POE jack and connect it into the RJ-45 Ethernet connector.

9 Snap the Altitude 4511 Access Point on to the mounted wall plate and secure the Altitude 4511 Access Point using the mounting plate lock screw. This connection does not require the use of tools or fastening hardware.



Once installed, no cables extend from the Altitude 4511 Access Point since they are hidden from view within the Telco Box.

10 Cable the Access Point using an 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller (both PoE capable):

- **a** Connect an RJ-45 CAT5 Ethernet cable between the network data supply (host) and an 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller's LAN/PoE enabled Ethernet port.
- **b** Connect an RJ-45 CAT5 Ethernet cable to the 802.113af Ethernet switch or the Summit WM3400 or WM3600 model controller's LAN/PoE enabled Ethernet port. Connect the other end of the Ethernet cable to the front of the Altitude 4511 Access Point.
- **c** Ensure the cable length from the Ethernet source (host) to the 802.113af Ethernet switch or a Summit WM3400 or WM3600 model controller and Access Point does not exceed 100 meters (333 ft).

11 Verify the behavior of the Altitude 4511 Access Point LEDs. For more information, see "LED Indicators" on page 18.

12 Once cabled and powered, the Altitude 4511 Access Point functions as either a Virtual Controller AP, Standalone AP or dependent mode AP, and receives its configuration once adopted by a Summit WM3400, WM3600 or WM3700 series controller or an

Altitude 4511 Access Point functioning in Virtual Controller mode. For information on using a controller to manage the Altitude 4511 Access Point, see: http://www.extremenetworks.com/go/documentation.

Altitude 4511 Access Point Antennas

The Altitude 4511 Access Point contains two internal (embedded) dual-band antennas supporting both the 802.11bgn (2.4 GHz) and 802.11an (5.0 GHz) bands. No customer assembly or antenna orientation is required.

The Altitude 4511 Access Point radio can transmit on one or two antennas depending on the operating mode. The radio can receive on one or two antennas as well. The data rates supported are different in each case.

LED Indicators

An Altitude 4511 Access Point has two LED activity indicators on the front of the unit.

The LEDs provide a status display indicating error conditions, transmission, and network activity for the 5 GHz 802.11a/n (amber) radio or the 2.4 GHz 802.11b/g/n (green) radio.

Task	5 GHz Activity LED (Amber)	2.4 GHz Activity LED (Green)
Unadopted	Off (if adopted)	Blinking
Normal Operation	• If this radio band is enabled: Blink at 5 second interval • If this radio band is disabled: Off • If there is activity on this band: Blink at a 1Hz	• If this radio band is enabled: Blink at 5 second interval • If this radio band is disabled: Off • If there is activity on this band: Blink at a 1Hz
Firmware Update	On	Off
Locate AP Mode	Blink at 5Hz (Out of Phase with Activity LED)	8 blinks at 50ms followed by an off interval of 1 second

3 Defining a Basic Configuration

CHAPTER

An Altitude 4511 Access Point can utilize an initial setup wizard to streamline the process of initially accessing the wireless network. The wizard defines the Access Point's operational mode, deployment location, basic security, network and WLAN settings.

Using the Initial Setup Wizard

Once the Altitude 4511 Access Point is installed and powered on, complete the following steps to get the Access Point up and running and access management functions:

1 The Access Point's IP address is optimally provided using DHCP. A zero config IP address can also be derived if DHCP resources are unavailable. Using zero config, the last two octets in the IP address are the decimal equivalent of the last two bytes in the Access Point's hardcoded MAC address.

   For example:

   MAC address - 00:C0:23:00:F0:0A
   Zero-config IP address - 169.254.240.10

   To derive the Access Point's IP address using its MAC address:

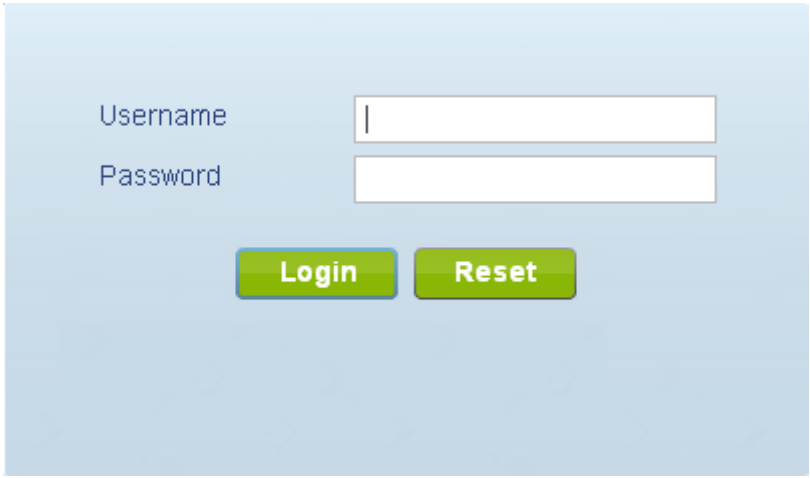
   a Open the Windows calculator be selecting *Start* > *All Programs* > *Accessories* > *Calculator*. This menu path may vary slightly depending on your version of Windows.

   b With the Calculator displayed, select *View* > *Scientific*. Select the *Hex* radio button.

   c Enter a hex byte of the Access Point's MAC address. For example, F0.

   d Select the *Dec* radio button. The calculator converts F0 into 240. Repeat this process for the last Access Point MAC address octet.

2 Point the Web browser to the Access Point's IP address. The following login screen displays:



3 Enter the default username *admin* in the *Username* field.

4 Enter the default password *admin123* in the *Password* field.

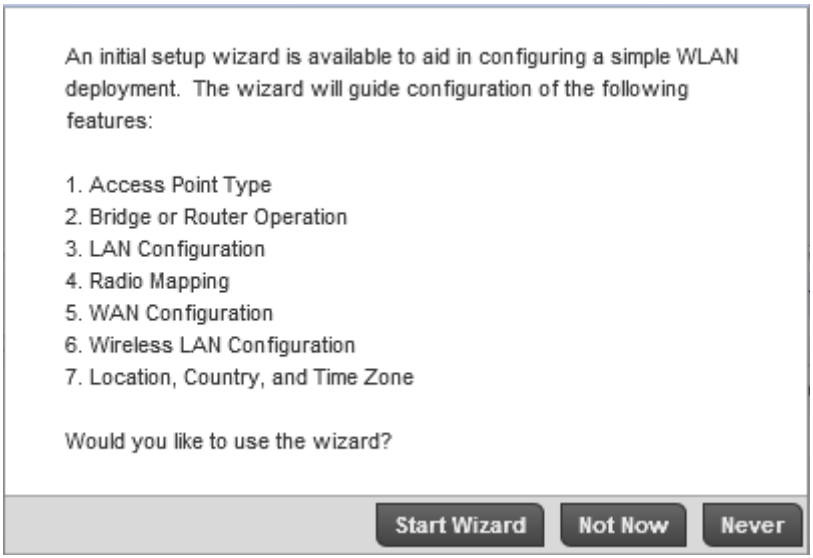
NOTE

When logging in for the first time, you're prompted to change the password to enhance device security in subsequent logins.

NOTE

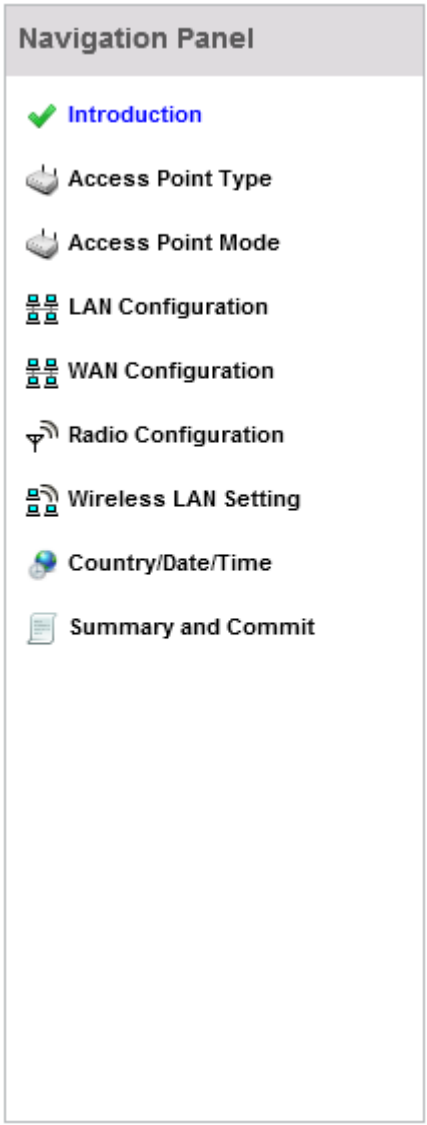
If you get disconnected when running the wizard, you can connect again with the Access Point's actual IP address (once obtained) and resume the wizard.

5 Click the *Login* button to load the management interface.


An initial setup wizard is available to aid in configuring a simple WLAN deployment. The wizard will guide configuration of the following features:
1. Access Point Type
2. Bridge or Router Operation
3. LAN Configuration
4. Radio Mapping
5. WAN Configuration
6. Wireless LAN Configuration
7. Location, Country, and Time Zone
Would you like to use the wizard?
Start Wizard
Not Now
Never

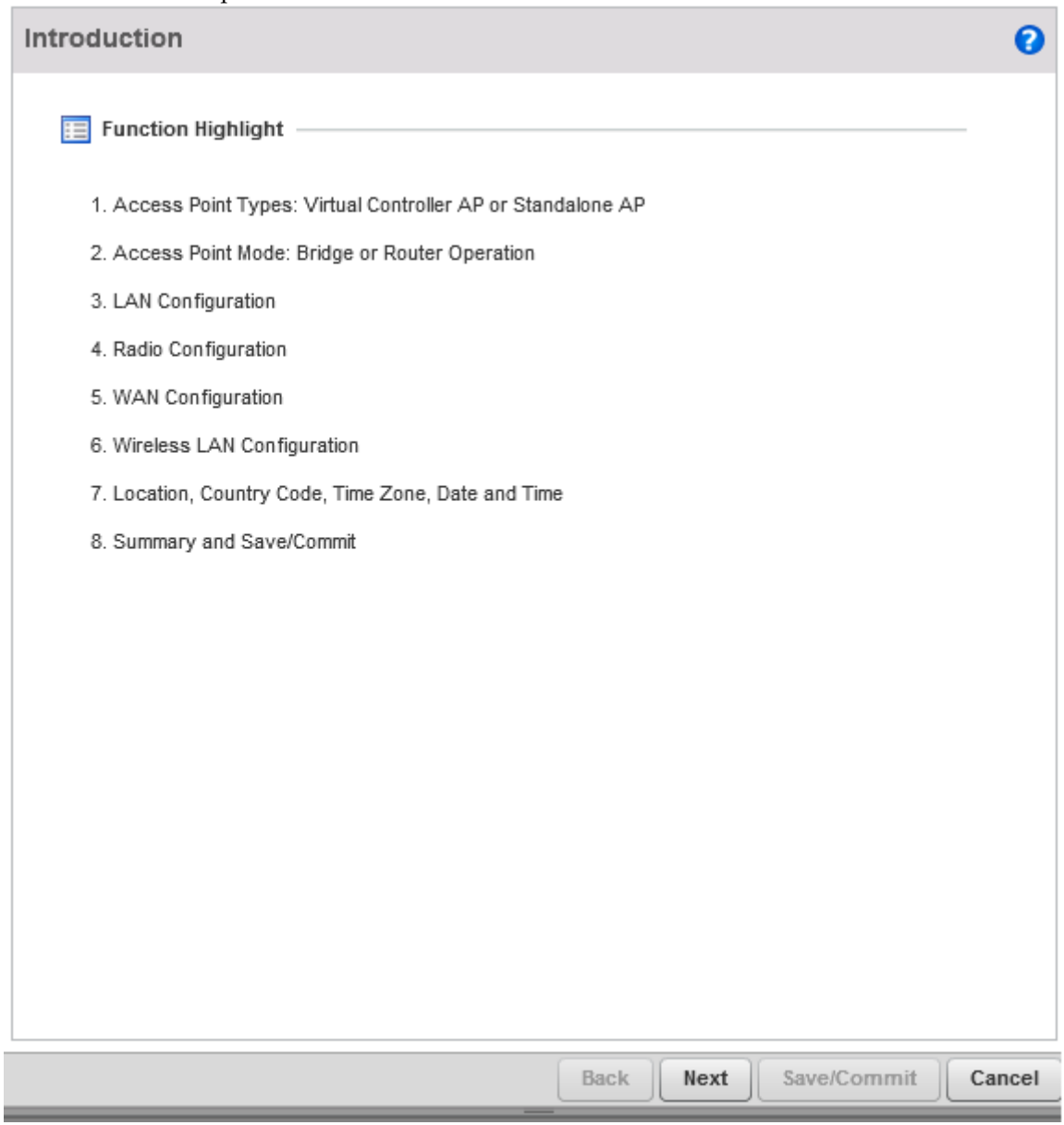
6 If this is the first time the management interface has been accessed, a dialogue displays to start the wizard. Select *Start Wizard* to run the initial setup wizard.

The first page of the Initial AP Setup Wizard displays the *Navigation Panel* and *Introduction* for the configuration activities comprising the Access Point's initial setup



A green checkmark to the left of an item in the Navigation Panel defines the listed task as having its minimum required configuration parameters set correctly. A red X defines the task as still requiring at least one parameter be defined correctly.

The Introduction screen displays a list of the basic configuration activities supported by the Initial Setup Wizard.

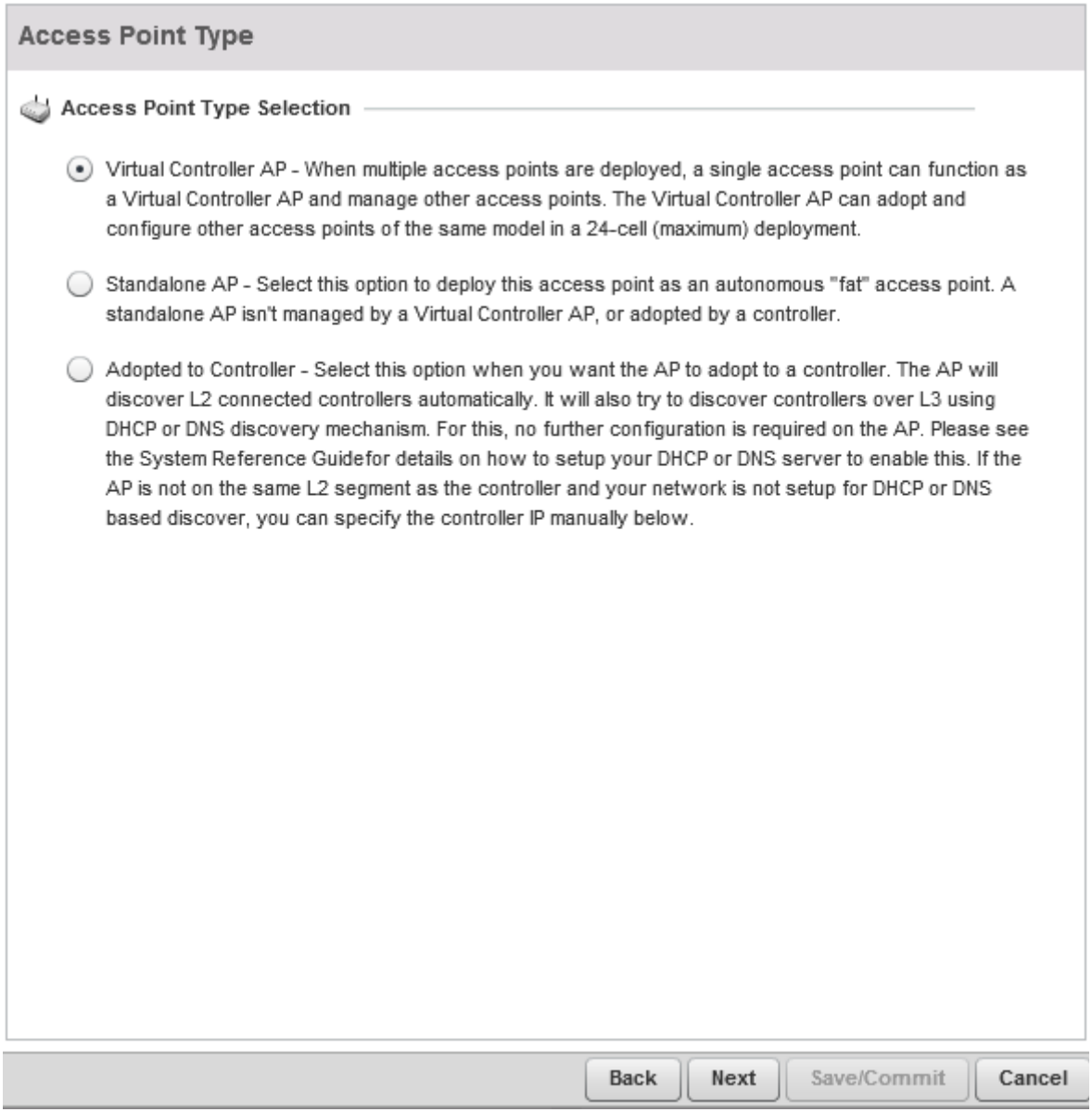


7 Select *Save/Commit* within each page to save the updates made to that page's configuration. Select *Next* to proceed to the next page listed in the Navigation Panel. Select *Back* to revert to the previous screen in the Navigation Panel without saving your updates.

NOTE

While you can navigate to any page in the navigation panel, you cannot complete the Initial AP Setup Wizard until each task in the Navigation Panel has a green checkmark.

8 Select *Next*. The Initial AP Setup Wizard displays the *Access Point Type* screen to define the Access Point's Standalone versus Virtual Controller AP functionality and the way the Access Point is adopted to a controller.


Access Point Type
Access Point Type Selection
Virtual Controller AP - When multiple access points are deployed, a single access point can function as a Virtual Controller AP and manage other access points. The Virtual Controller AP can adopt and configure other access points of the same model in a 24-cell (maximum) deployment.
Standalone AP - Select this option to deploy this access point as an autonomous "fat" access point. A standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.
Adopted to Controller - Select this option when you want the AP to adopt to a controller. The AP will discover L2 connected controllers automatically. It will also try to discover controllers over L3 using DHCP or DNS discovery mechanism. For this, no further configuration is required on the AP. Please see the System Reference Guidefor details on how to setup your DHCP or DNS server to enable this. If the AP is not on the same L2 segment as the controller and your network is not setup for DHCP or DNS based discover, you can specify the controller IP manually below.
Back
Next
Save/Commit
Cancel

9 Select an *Access Point Type* from the following options:

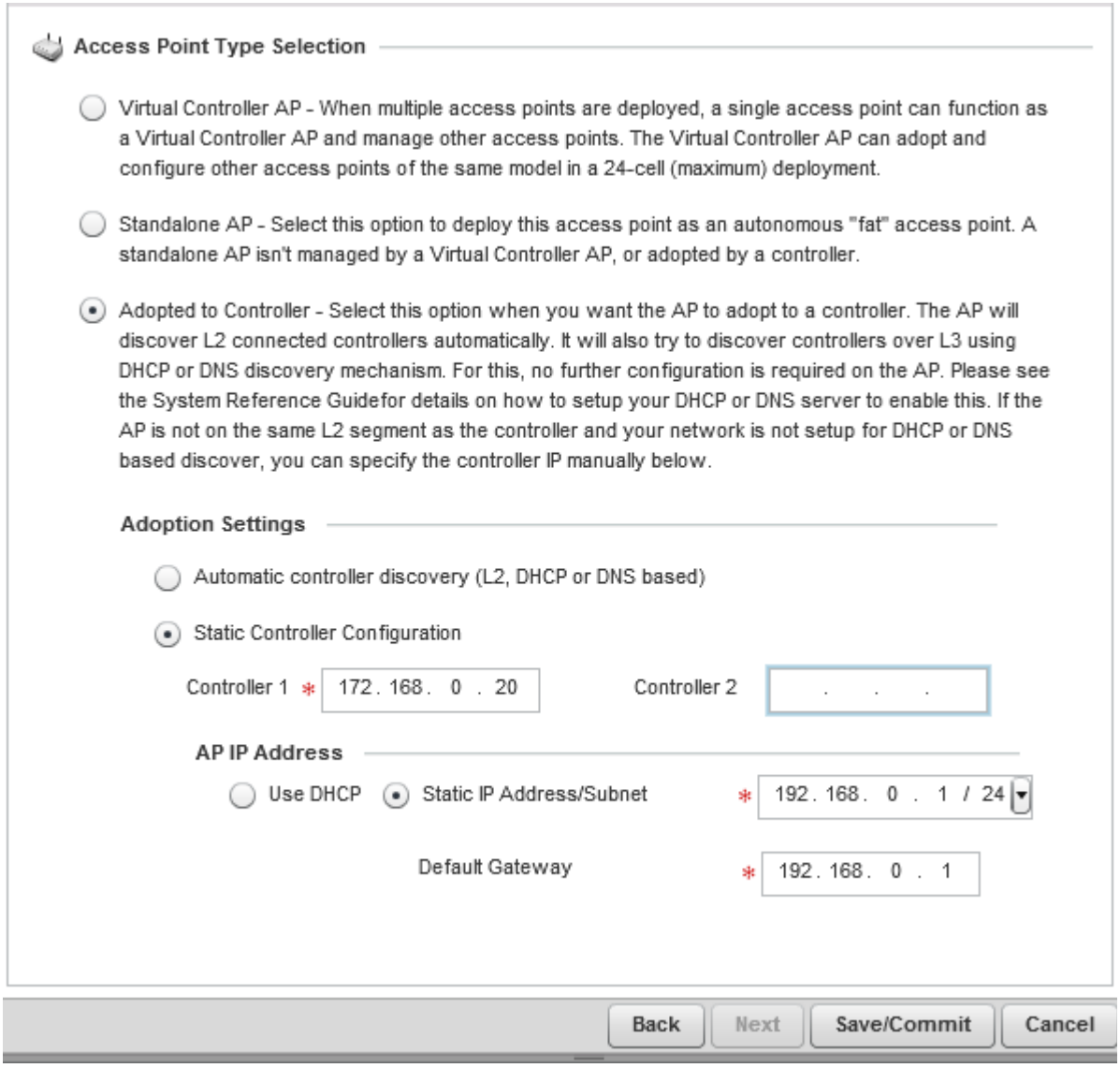
- *Virtual Controller AP* - When more than one Access Point is deployed, a single Access Point can function as a Virtual Controller AP. Up to 24 Access Points can be connected to, and managed by, a single Virtual Controller AP of the same Altitude 4511 Access Point model.
- *Standalone AP* -Select this option to deploy this Access Point as an autonomous fat Access Point. A Standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

NOTE

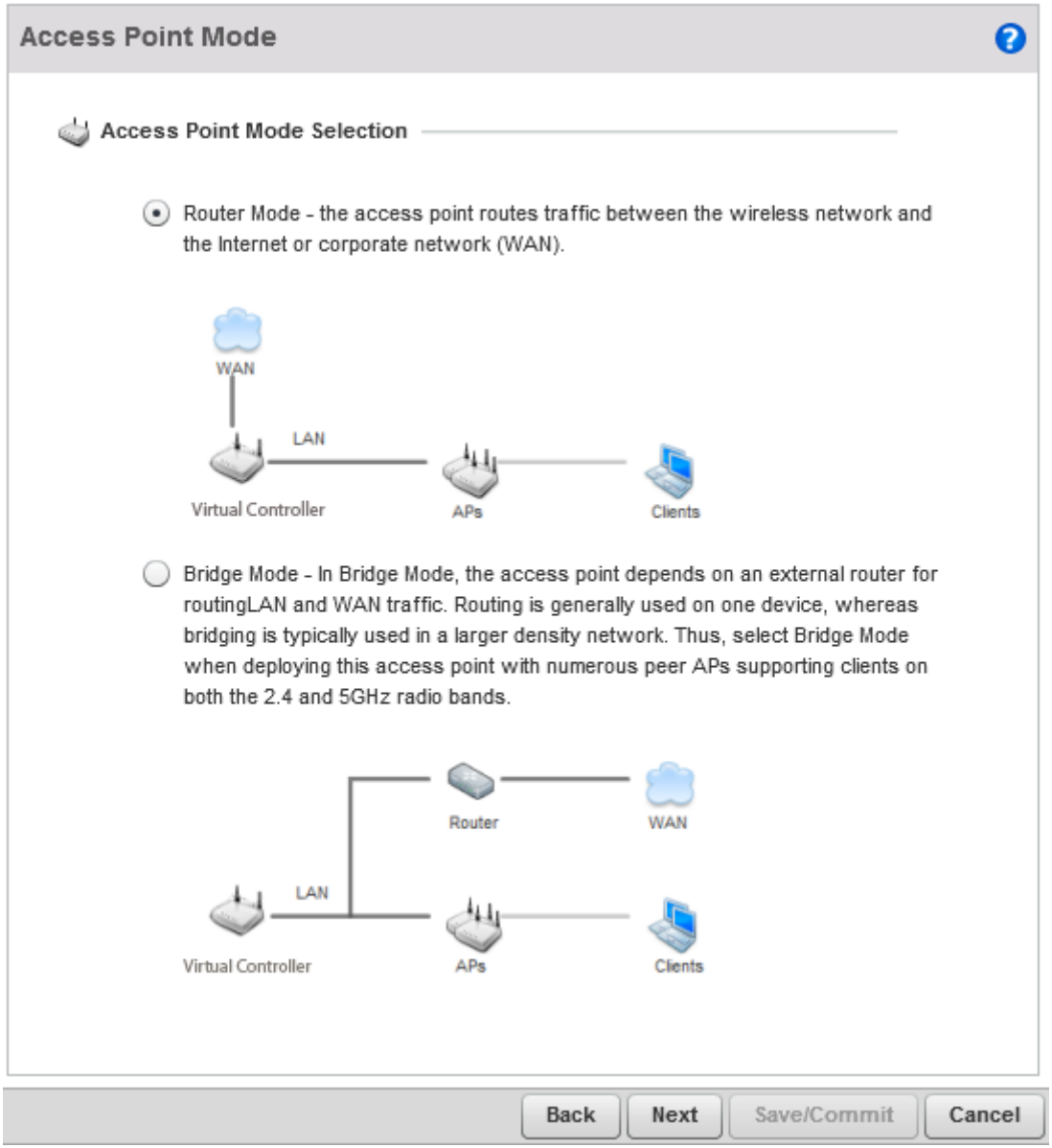
If designating the Access Point as a Standalone AP, Extreme Networks recommends the Access Point's UI be used exclusively to define its device configuration, and not the CLI. The CLI provides the ability to define more than one profile and the UI does not. Consequently, the two interfaces cannot be used collectively to manage profiles without an administrator encountering problems.

- *Adopted to Controller* - Select this option when deploying the Access Point as a controller managed (Dependent mode) Access Point. Selecting this option closes the Initial AP Setup Wizard. An adopted Access Point obtains its configuration from a profile stored on its managing controller. Any manual configuration changes are overwritten by the controller upon reboot.

Select the *Automatic controller discovery* option to enable the Access Point to be discovered and adopted using layer 2 settings. If preferring layer 3 adoption, select the *Static Controller Configuration* option, and define the addresses of the preferred controllers. If using the static method, you'll also need to define whether the Access Point receives an IP address using DHCP or if IP resources are provided statically.


Access Point Type Selection
Virtual Controller AP - When multiple access points are deployed, a single access point can function as a Virtual Controller AP and manage other access points. The Virtual Controller AP can adopt and configure other access points of the same model in a 24-cell (maximum) deployment.
Standalone AP - Select this option to deploy this access point as an autonomous "fat" access point. A standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.
Adopted to Controller - Select this option when you want the AP to adopt to a controller. The AP will discover L2 connected controllers automatically. It will also try to discover controllers over L3 using DHCP or DNS discovery mechanism. For this, no further configuration is required on the AP. Please see the System Reference Guidefor details on how to setup your DHCP or DNS server to enable this. If the AP is not on the same L2 segment as the controller and your network is not setup for DHCP or DNS based discover, you can specify the controller IP manually below.
Adoption Settings
Automatic controller discovery (L2, DHCP or DNS based)
Static Controller Configuration
Controller 1 * 172 . 168 . 0 . 20
Controller 2
AP IP Address
Use DHCP
Static IP Address/Subnet
* 192 . 168 . 0 . 1 / 24
Default Gateway
* 192 . 168 . 0 . 1
Back
Next
Save/Commit
Cancel

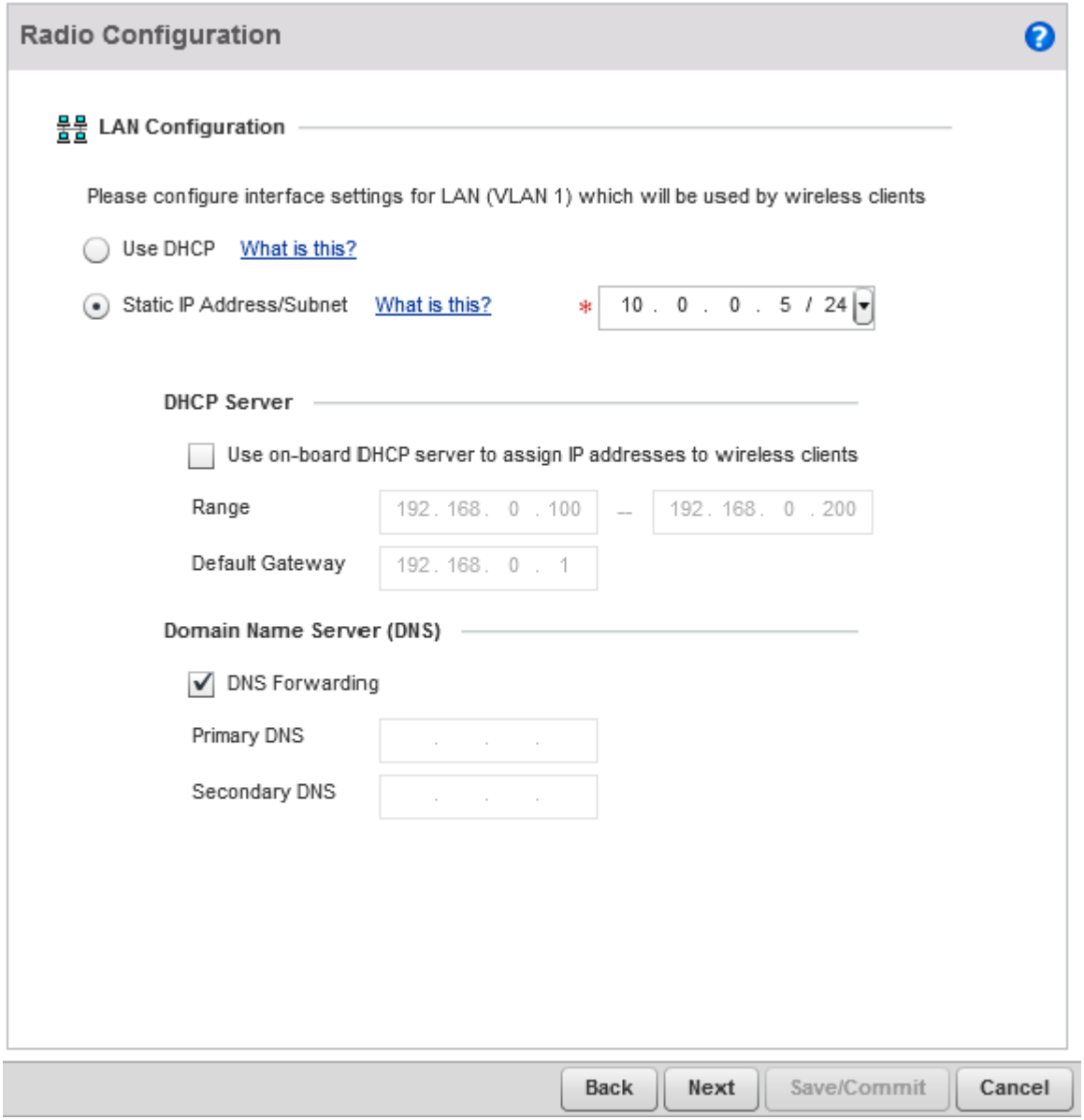
10 Select *Next*. The Initial AP Setup Wizard displays the *Access Point Mode* screen to define the Access Point's routing or bridging mode functionality.


Access Point Mode
Access Point Mode Selection
Router Mode - the access point routes traffic between the wireless network and the Internet or corporate network (WAN).
WAN
LAN
Virtual Controller
APs
Clients
Bridge Mode - In Bridge Mode, the access point depends on an external router for routingLAN and WAN traffic. Routing is generally used on one device, whereas bridging is typically used in a larger density network. Thus, select Bridge Mode when deploying this access point with numerous peer APs supporting clients on both the 2.4 and 5GHz radio bands.
Router
WAN
LAN
Virtual Controller
APs
Clients
Back
Next
Save/Commit
Cancel

11 Select an *Access Point Mode* from the available options.

- *Router Mode* - In Router Mode, the Access Point routes traffic between the local network (LAN) and the Internet or external network (WAN). Router mode is recommended in a deployment supported by just a single Access Point.
- *Bridge Mode* - In Bridge Mode, the AP depends on an external router for routing LAN and WAN traffic. Routing is generally used on one device, whereas bridging is typically used in a larger network. Thus, select Bridge Mode when deploying this Access Point with numerous peer APs supporting clients on both the 2.4 and 5GHz radio bands.

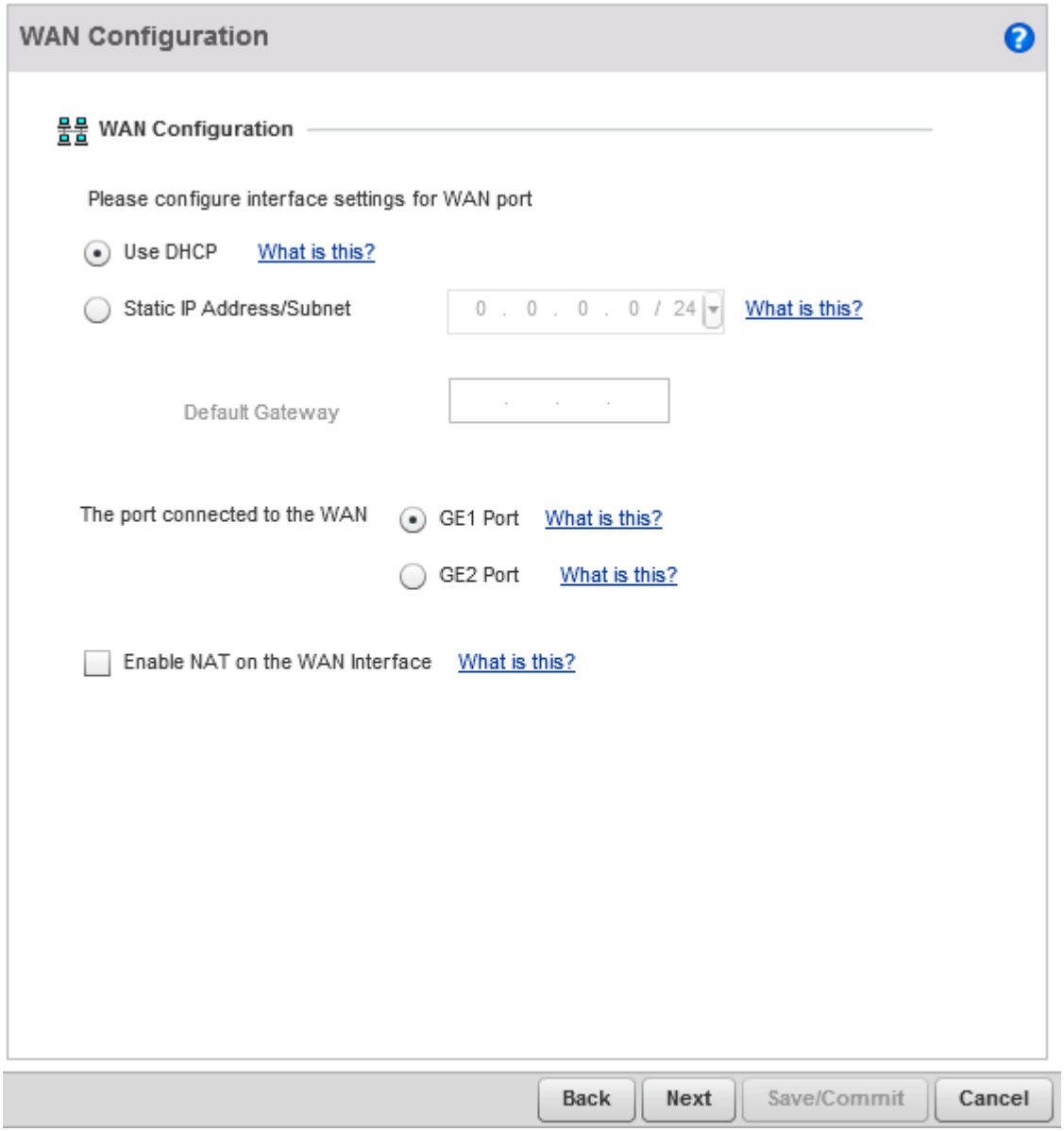
12 Select *Next*. The Initial AP Setup Wizard displays the *LAN Configuration* screen to set the Access Point's LAN interface configuration.



13 Set the following DHCP and Static IP Address/Subnet information for the LAN interface:

- *Use DHCP* - Select the checkbox to enable an automatic network address configuration using the external DHCP server.
- *Static IP Address/Subnet* - Enter an IP Address and a subnet for the Access Point's LAN interface. If *Use DHCP* is selected, this field is not available. When selecting this option, define the following *DHCP Server* and *Domain Name Server (DNS)* resources, as those fields will become enabled on the bottom portion of the screen.
  - *Use on-board DHCP server to assign IP addresses to wireless clients* - Select the checkbox to enable the Access Point's DHCP server to provide IP and DNS information to clients on the LAN interface.
  - *Range* - Enter a starting and ending IP Address range for client assignments on the Access Point's LAN interface. Avoid assigning IP addresses from x.x.x.1 - x.x.x.10 and x.x.x.255, as they are often reserved for standard network services. This is a required parameter.
  - *Default Gateway* - Define a default gateway address for use with the default gateway. This is a required parameter.
- *DNS Forwarding* - Select this option to allow a DNS server to translate domain names into IP addresses. If this option is not selected, a primary and secondary DNS resource must be specified. DNS forwarding is useful when a request for a domain name is made but the DNS server, responsible for converting the name into its corresponding IP address, cannot locate the matching IP address.
  - *Primary DNS* - Enter an IP Address for the main Domain Name Server providing DNS services for the Access Point's LAN interface.
  - *Secondary DNS* - Enter an IP Address for the backup Domain Name Server providing DNS services for the Access Point's LAN interface.

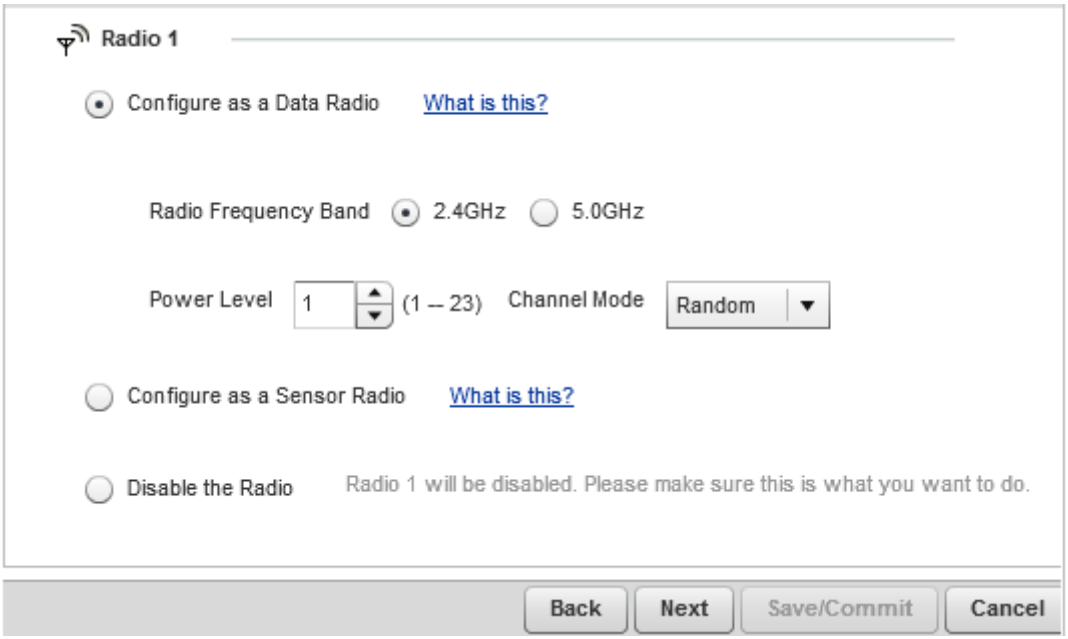
14 Select *Next*. The Initial AP Setup Wizard displays the *WAN Configuration* screen to set the Access Point's WAN interface configuration.



15 Set the following DHCP and Static IP Address/Subnet information for the WAN interface:

- *Use DHCP* - Select the checkbox to enable an automatic network address configuration using the external DHCP server.
- *Static IP Address/Subnet* - Enter an IP Address/Subnet and gateway for the Access Point's WAN interface. These are required fields.
- *The port connected to the WAN* - Select the port used as the physical Access Point connection to the external network. This ports available differ depending on the Access Point model deployed. Access Point models with a single port have this option fixed.
- *Enable NAT on the WAN Interface* - Select the checkbox to allow traffic to pass between the Access Point's WAN and LAN interfaces.

16 Select *Next*. The Initial AP Setup Wizard displays the *Radio Configuration* screen to define support for the 2.4GHz radio band, 5GHz radio band or to set the radio's functionality as a dedicated sensor. An Altitude 4511 Access Point supports a single dual-band radio.



NOTE

The *ADSP Sensor Support* field displays at the bottom of the screen only if a radio has been dedicated as a sensor.

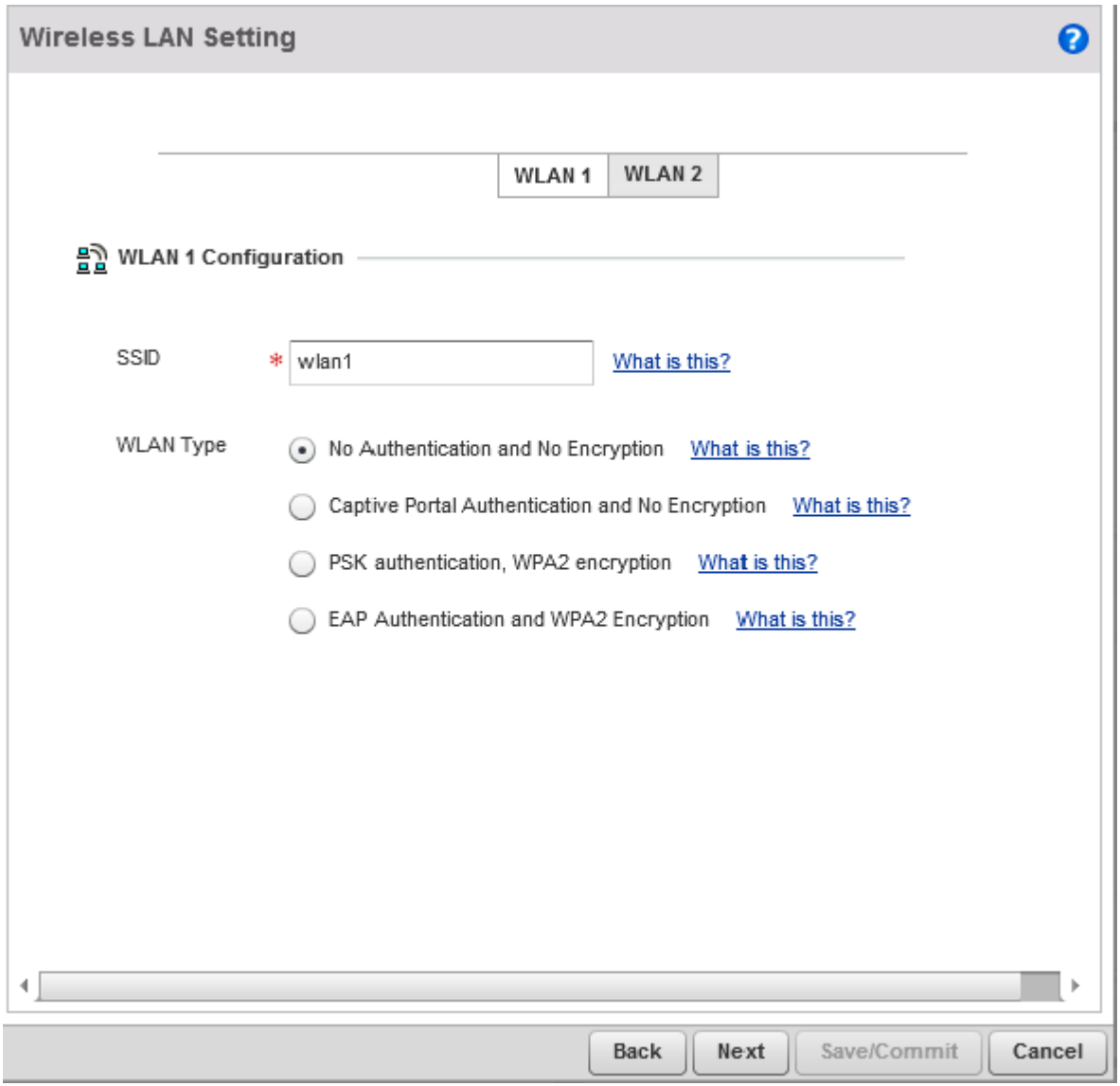
17 Set the following parameters for the radio:

- *Configure as a Data Radio* - Select this option to dedicate this radio for WLAN client support in either the selected 2.4 or 5GHz radio band.
  - *Radio Frequency Band* - Select either the 2.4GHz or 5.0GHz radio band to use with the radio when selected as a Data Radio. The selected band is used for WLAN client support. Considers selecting one radio for 2.4GHz and another for 5GHz support (if using a dual or three radio model) when supporting clients in both the 802.11bg and 802.11n bands.
  - *Power Level* - Use the spinner control to select a 1 - 23 dBm minimum power level to assign to this radio in selected 2.4 or 5.0 GHz band. 1 dBm is the default setting.
  - *Channel Mode* - Select either *Random*, *Best* or *Static*. Select *Random* for use with a 802.11a/n radio. To comply with *Dynamic Frequency Selection* (DFS) requirements in the European Union, the 802.11a/n radio uses a randomly selected channel each time the Access Point is powered on.
    Select *Best* to enable the Access Point to scan non-overlapping channels and listen for beacons from other Access Points. After the channels are scanned, it will select the channel with the fewest Access Points. In the case of multiple Access Points on the same channel, it will select the channel with the lowest average power level. When *Constantly Monitor* is selected, the Access Point will continuously scan the network for excessive noise and sources of interference. Select *Static* to assign the Access Point a permanent channel and scan for noise and interference only when initialized.
- *Configure as a Sensor Radio* - Select this option to dedicate the radio to sensor support exclusively. When functioning as a sensor, the radio scans in sensor mode across all channels within the 2.4 and 5.0GHz bands to identify potential threats within the Access Point managed network. If dedicating a radio as a sensor resource, a primary and secondary ADSP server must be specified as an ADSP management resource.
- *Disable the Radio* - Select this option to disable this radio, thus prohibiting it from either providing WLAN or sensor support. Verify this course action with your network administrator before rendering the radio offline.

NOTE

If configuring an *Altitude 4511 Access Point* as a sensor, the Access Point will require a reboot before its sensor functionality is invoked. The reboot can take place at the completion of the Initial AP Setup Wizard.

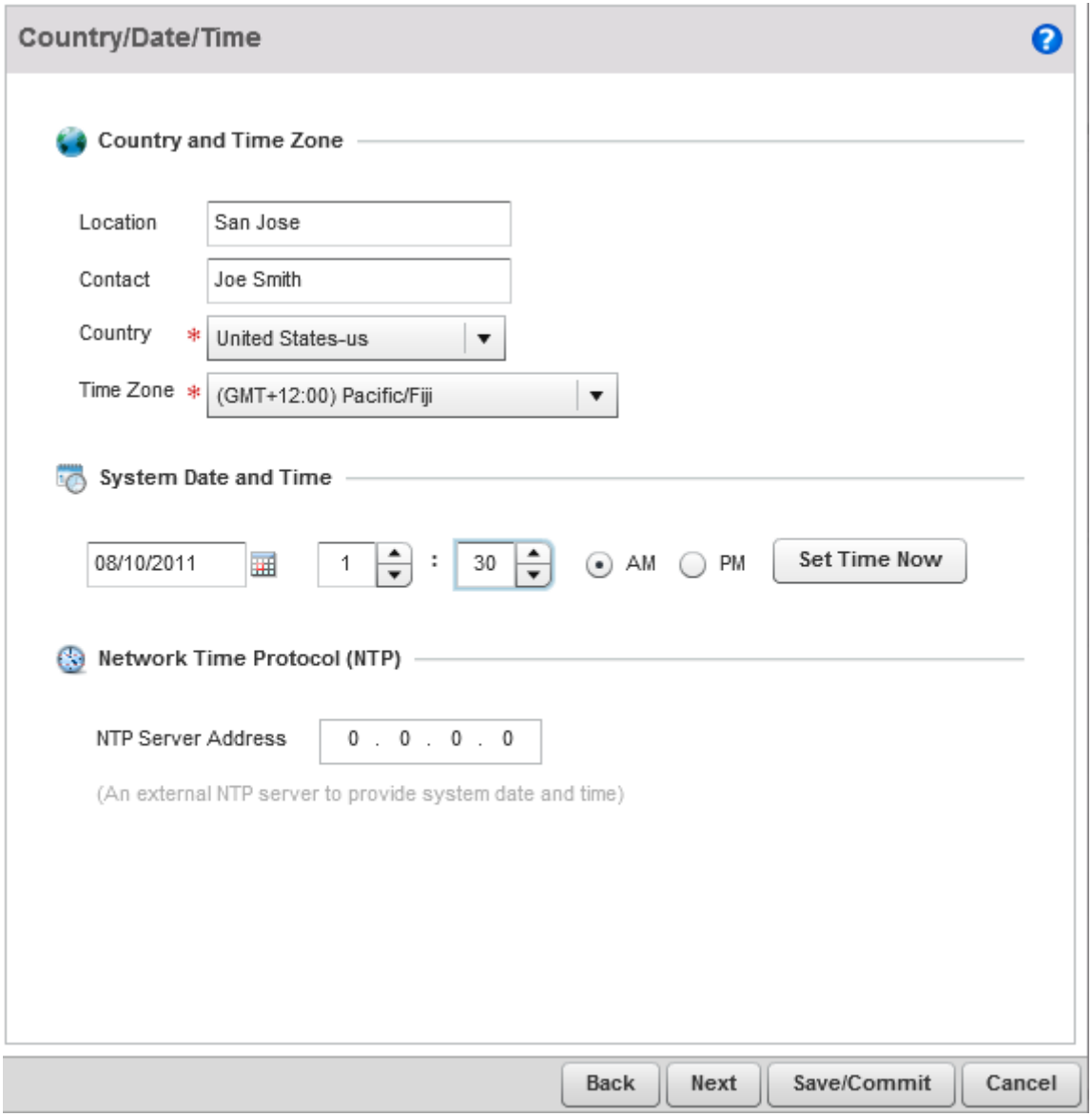
18 Select *Next*. The Initial AP Setup Wizard displays the *Wireless LAN Setting* screen to define network address and security settings for two WLAN configurations available to the Access Point as part of the Initial AP Setup Wizard. Once the Access Point has an initial configuration defined, numerous additional WLAN configurations can be set.



19 Set the following parameters for each of the two WLAN configurations available as part of this Initial AP Setup Wizard:

- *SSID* - Enter or modify the *Services Set Identification* (SSID) associated with the WLAN. The WLAN name is auto-generated using the SSID until changed by the user. The maximum number of characters is 32. Do not use < > | “ & \ ? , This is a required parameter for each WLAN.
- *WLAN Type* - Set the data protection scheme used by clients and Access Points within the WLAN. The following options are available:
  - *No Authentication and no Encryption* - Select this option to provide no security between the Access Point and connected clients on this WLAN.
  - *Captive Portal Authentication and No Encryption* - Select this option to use a Web page (either internally or externally hosted) to authenticate users before access is granted to the network.
  - *PSK Authentication and WPA2 Encryption* - Select the option to implement a pre-shared key that must be correctly shared between the Access Point and requesting clients using this WLAN. If using this option, specify a WPA key in either ASCII (8-63 characters) or HEX (64 characters) format.
  - *EAP Authentication and WPA2 Encryption* - Select this option to authenticate clients within this WLAN through the exchange and verification of certificates.
- *WPA Key* - If a WPA key is required (PSK Authentication and WPA2 Encryption), enter an alphanumeric string of 8 to 63 ASCII characters or 64 HEX characters as the primary string both transmitting and receiving authenticators must share. The alphanumeric string allows character spaces. This passphrase saves the administrator from entering the 256-bit key each time keys are generated.
- *RADIUS Server* - If the WLAN type requires a RADIUS server to validate user credentials, provide the IP address of the external server and the shared secret used to authenticate the request. The Altitude 4511 Access Point does not have an on-board RADIUS server.

20 Select *Next*. The Initial AP Setup Wizard displays the *Country/Date/Time* screen to set device deployment, administrative contact and system time information. The system time can either be set manually or be supplied by a dedicated *Network Time Protocol* (NTP) resource.



21 Refer to the *Country and Time Zone* field to set the following device deployment information:

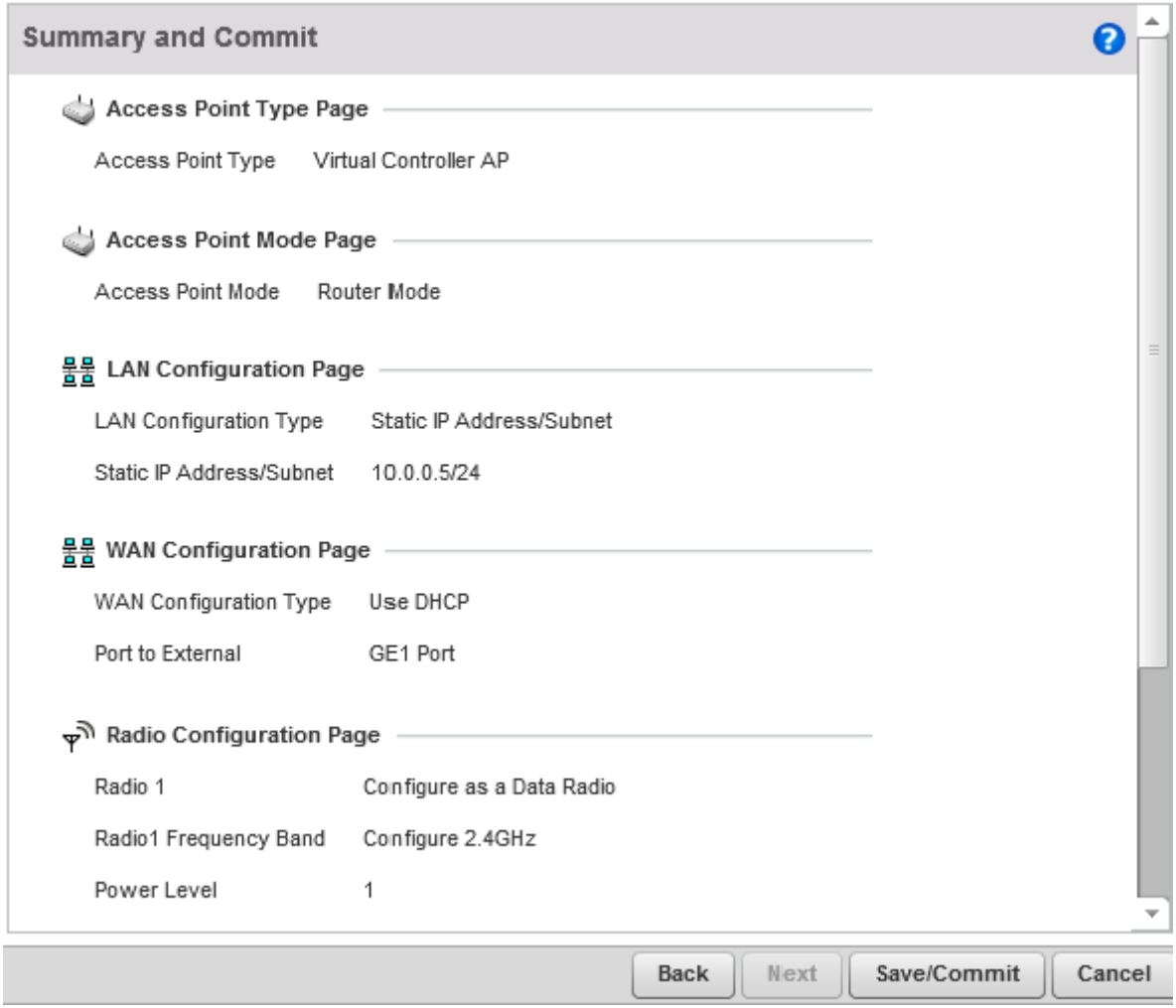
- *Location* - Define the location of the Access Point. The Location parameter acts as a reminder of where the AP can be located within the Extreme Networks managed wireless network.
- *Contact* - Specify the contact information for the administrator. The credentials provided should accurately reflect the individual responding to service queries.
- *Country* - Select the Country where the Access Point is deployed. The Access Point prompts for the correct country code on the first login. A warning message also displays stating an incorrect country setting may result in illegal radio operation. Selecting the correct country is central to legal operation. Each country has its own regulatory restrictions concerning electromagnetic emissions and the maximum RF signal strength that can be transmitted. This is a required parameter.
- *Time Zone* - Set the time zone where the Access Point is deployed. This is a required parameter. The setting should be complimentary with the selected deployment country.

22 If an NTP resource is unavailable, set the *System Date and Time* (calendar date, time and AM/PM designation).

23 Optionally enter the IP address of a server used to provide system time to the Access Point. Once the IP address is entered, the *Network Time Protocol (NTP)* functionality is engaged automatically for synchronization with the NTP resource.

24 Select *Next*. The Initial AP Setup Wizard displays the *Summary and Commit* screen to summarize the screens (pages) and settings updated using the Initial AP Setup Wizard.

There is no user intervention or additional settings required within this screen. Its an additional means of validating the configuration before its deployed. However, if a screen displays settings not intended as part of the initial configuration, the screen can be selected from within the Navigation Panel and its settings modified accordingly.



25 If the configuration displays as intended, select the *Save/Commit* button to implement these settings to the Access Point's configuration. If additional changes are warranted based on the summary, either select the target page from the Navigational Panel, or use the *Back* and *Next* buttons to scroll to the target screen.

4 Specifications

CHAPTER

Electrical Characteristics

An Altitude 4511 Access Point has the following electrical characteristics:

Operating Current & Voltage	250mA@48VDC

Physical Characteristics

An Altitude 4511 Access Point has the following physical characteristics:

Dimensions	2.75 width x 5 height x 1.25 deep (Inches) 6.985 width x 12.7 height x 3.175 deep (centimeters)
Housing	Plastic and metal
Weight	0.5 lbs (with mounting plate)
Operating Temperature	32°F to 104°F/0°C to 40°C
Storage Temperature	-40°F to 158°F/-40°C to 85°C
Operating Humidity	5 to 95% Relative Humidity non-condensing
Storage Humidity	95% Relative Humidity non-condensing
Operating Altitude (max)	8,000 ft @ 28°C
Storage Altitude (max)	30,000 ft @ 12°C
Electrostatic Discharge	+/-8kV Air and +/-8kV Contact @ 50% Relative Humidity

Radio Characteristics

An Altitude 4511 Access Point has the following radio characteristics:

Operating Channels	All channels from 5180 MHz to 5825 MHz Channels 1-13 (2412-2472 MHz) Actual operating frequencies depend on regulatory approval for the country of use.
Data Rates Supported	*802.11b*: 1Mbps, 2Mbps, 5.5Mbps and 11Mbps *802.11g*: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36MBps, 48Mbps and 54Mbps *802.11n*: MCS0 through MCS15, HT20 and HT40
Wireless Medium	*Direct Sequence Spread Spectrum* (DSSS), *Orthogonal Frequency Division Multiplexing* (OFDM) *Spatial multiplexing* (MIMO)
Network Standards	802.11a, 802.11b, 802.11g, 802.3, 802.11n
Typical Transmit Power Per Antenna	2.4G: +24dBm max 5.2G: +22dBm max
Transmit Power Adjustment	1dB increments

5 Regulatory Information

CHAPTER

Regulatory Overview

This guide applies to the Altitude 4511 Access Point.

All Extreme Networks devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Any changes or modifications to Extreme Networks equipment, not expressly approved by Extreme Networks, could void the user's authority to operate the equipment.

Extreme Networks Access Points must be professionally installed and configured so that the Radio Frequency Output Power will not exceed the maximum allowable limit for the country of operation.

Antennas: Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could cause damage and may violate regulations. Use of an unapproved antenna is illegal under FCC regulations subjecting the end user to fines and equipment seizure.

Wireless Device Country Approvals

Regulatory markings, subject to certification, are applied to the device signifying the radio(s) is/are approved for use in the following countries: United States, Canada, Japan, China, S. Korea, Australia, and Europe.

Please refer to the *Declaration of Conformity* (DoC) for details of other country markings. This is available at http://www.extremenetworks.com/go/rfcertification.htm.

NOTE

Note: For 2.4GHz or 5GHz Products: Europe includes, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Operation of the device without regulatory approval is illegal.

Country Selection – Note for AP & Wireless Controller

Select only the country in which you are using the device. Any other selection will make the operation of this device illegal. The US version of the Access Point will only have US listed in the country selection table. The US version will be sold / used in the US protectorates: American Samoa, Guam, Puerto Rico, US Virgin Islands.

Frequency of Operation – FCC and IC

5 GHz Only. The use on UNII (Unlicensed National Information Infrastructure) Band 1 5150-5250 MHz and Band 3 5470 - 5725 MHz is restricted to indoor use only, any other use will make the operation of this device illegal.

Devices using the 5470 – 5725 MHz band shall not be capable of transmitting in the band 5600 - 5650 MHz in the US, this “Notched” band has been disabled in the US version of the Access Point.

2.4 GHz Only. The available channels for 802.11 b/g operation in the US are Channels 1 to 11. The range of channels is limited by firmware.

Health and Safety Recommendations

Warnings for the use of Wireless Devices

Please observe all warning notices with regard to the usage of wireless devices

Potentially Hazardous Atmospheres – Fixed Installations

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).

Safety in Hospitals

Wireless devices transmit radio frequency energy and may affect medical electrical equipment. When installed adjacent to other equipment, verify adjacent equipment is not adversely affected.

Pacemakers. Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Persons with Pacemakers:

- Should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON.
- Should not carry the device in a breast pocket.
- Should use the ear furthest from the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, turn OFF your device.

Other Medical Devices. Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

RF Exposure Guidelines

Safety Information

Reducing RF Exposure—Use Properly. Only operate the device in accordance with the instructions supplied.

International

The device complies with internationally recognized standards covering human exposure to electromagnetic fields from radio devices. For information on "International" human exposure to eletromagnic fields refer to the Declaration of Conformity (DoC) at http://www.extremenetworks.com/go/rfcertification.htm.

EU

Remote and Standalone Antenna Configurations. To comply with EU RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

US and Canada

Co-located statement. To comply with FCC RF exposure compliance requirement, the antennas used for this transmitter must not be co-located or operating in conjunction with any other transmitter/antenna except those already approved in this filing.

Remote and Standalone Antenna Configurations. To comply with FCC RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

Power Supply

This device is powered from an 802.3af compliant power source which is UL approved and certified by the appropriate agencies.

This product is intended to be supplied by a UL certified product and rated from 48 Vdc, 250mA.

Radio Frequency Interference Requirements – FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver
- Connect the equipment into an o
- utlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Radio Transmitters (Part 15). This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Restricted Band 5.60 – 5.65 GHz

Radio Frequency Interference Requirements – Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio Transmitters

For RLAN Devices:

The use of 5 GHz RLANs for use in Canada, have the following restrictions:

- Restricted Band 5.60 – 5.65 GHz

This device complies with RSS 210 of Industry & Science Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Label Marking: The Term "IC:" before the radio certification only signifies that Industry Canada technical specifications were met.

CE Marking and European Economic Area (EEA)

The use of 2.4 GHz RLAN's, for use through the EEA, have the following restrictions:

- Maximum radiated transmit power of 100 mW EIRP in the frequency range 2.400 -2.4835 GHz.
- France, outside usage is restricted to 2.4 – 2.454 GHz.
- Italy requires a user license for outside usage.

Statement of Compliance

Extreme Networks hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A Declaration of Conformity may be obtained from
http://www.extremenetworks.com/go/rfcertification.htm.

Waste Electrical and Electronic Equipment (WEEE)

English: For EU Customers: All products at the end of their life must be returned to Extreme Networks for recycling. For information on how to return product, please go to:http://www.extremenetworks.com/go/eu-weee.

Français : Clients de l'Union Européenne : Tous les produits en fin de cycle de vie doivent être retournés à Extreme Networks pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : http://www.extremenetworks.com/go/eu-weee.

Español: Para clientes en la Unión Europea: todos los productos deberán entregarse a Extreme Networks al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.extremenetworks.com/go/eu-weee.

Bulgarish: За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Extreme Networks за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.extremenetworks.com/go/eu-weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Extreme Networks zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.extremenetworks.com/go/eu-weee.

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Extreme Networks al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web:http://www.extremenetworks.com/go/eu-weee.

Português: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Extreme Networks para reciclagem. Para obter informações sobre como devolver o produto, visite: http://www.extremenetworks.com/go/eu-weee.

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Extreme Networks te worden teruggezonden voor recycling. Raadpleeg http://www.extremenetworks.com/go/eu-weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale¿y zwróciæ do firmy Extreme Networks w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¹ siê na stronie internetowej http://www.extremenetworks.com/go/eu-weee

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skonèení jejich životnosti vrátit spoleènosti Extreme Networks k recyklaci. Informace o zpùsobu vrácení produktu najdete na webové stránce: http://www.extremenetworks.com/go/eu-weee

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Extreme Networks'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.extremenetworks.com/go/eu-weee.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Extreme Networks vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.extremenetworks.com/go/eu-weee weboldalra

Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Extreme Networks för återvinning. Information om hur du returnerar produkten finns på http://www.extremenetworks.com/go/eu-weee

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Extreme Networks-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.extremenetworks.com/go/eu-weee.

Dansk: Til kunder i EU: Alle produkter skal returneres til Extreme Networks til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.extremenetworks.com/go/eu-weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Extreme Networks για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.extremenetworks.com/go/eu-weee στο Διαδίκτυο.

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Extreme Networks għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: http://www.extremenetworks.com/go/eu-weee.

Românesc: Pentru clienții din UE: Toate produsele, la sfârșitul duratei lor de funcționare, trebuie returnate la Extreme Networks pentru reciclare. Pentru informații despre returnarea produsului, accesați: http://www.extremenetworks.com/go/eu-weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Extreme Networks za reciklažo. Za informacije o vraèilu izdelka obišèite: http://www.extremenetworks.com/go/eu-weee.

Slovenčina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Extreme Networks na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.extremenetworks.com/go/eu-weee.

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti grąžinti utilizuoti į kompaniją Extreme Networks. Daugiau informacijos, kaip grąžinti gaminį, rasite: http://www.extremenetworks.com/go/eu-weee

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Extreme Networks otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu lūdzu, skatiet: http://www.extremenetworks.com/go/eu-weee .

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Extreme Networks'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: http://www.extremenetworks.com/go/eu-weee

TURKISH WEEE Statement of Compliance

EEE Yönetmeliğine Uygundur

Japan (VCCI) - Voluntary Control Council for Interference Class B ITE

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Korea Warning Statement for Class B ITE

B 급 기기 (가정용 방송통신기기): 이 기기는 가정용 (B 급) 으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .

Class B device (Broadcasting Communication Device for Home Use): This device obtained EMC registration mainly for home use (Class B) and may be used in all areas.

Other Countries

Australia

Use of 5 GHz RLANs in Australia is restricted in the following band 5.50 – 5.65 GHz.

Brazil

Regulatory declarations for the Altitude 4511 Access Point - BRAZIL

Note: The certification mark applied to the Altitude 4511 Access Point is for Restrict Radiation Equipment. This equipment operates on a secondary basis and does not have the right for protection against harmful interference from other users including same equipment types. Also this equipment must not cause interference to systems operating on primary basis.

For more information consult the website *http://www.anatel.gov.br*

Declarações Regulamentares para Altitude 4511 Access Point - Brasil

Nota: "A marca de certificação se aplica ao Transceptor, modelo Altitude 4511 Access Point. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário."

Para maiores informações sobre ANATEL consulte o site: *http://www.anatel.gov.br*

Chile

"Este equipo cumple con la Resolución No 403 de 2008, de la Subsecretaria de telecomunicaciones, relativa a radiaciones electromagnéticas.".

"This device complies with the Resolution Not 403 of 2008, of the Undersecretary of telecommunications, relating to electromagnetic radiation."

Mexico

Restrict Frequency Range to: 2.450 – 2.4835 GHz.

Taiwan

NOTICE!

According to: Administrative Regulations on Low Power Radio Waves Radiated Devices

Article 12

Without permission granted by the DGT, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices.

Article 14

The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved.

The said legal communications means radio communications are operated in compliance with the Telecommunications Act.

The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

臺灣

低功率電波輻射性電機管理辦法

第十二條
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Wireless devices operate in the frequency band of 5.25-5.35 GHz, limited for Indoor use only.

在 5.25-5.35 赫頻帶內操作之無線資訊傳輸設備，限於室內使用。

Korea

For radio equipment using 2400~2483.5MHz or 5725~5825MHz, the following expressions should be displayed:

1 “This radio equipment can be interfered with during operation.”

당해 무선설비는 운용 중 전파혼신 가능성이 있음

2 “This radio equipment cannot provide a service relevant to human life safety, as it can be crossed” through the user manual, etc.

당해 무선설비 는전파혼 신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다

6 Customer Support

CHAPTER

NOTE

Services can be purchased from Extreme Networks or through one of its channel partners. If you are an end-user who has purchased service through an Extreme Networks channel partner, please contact your partner first for support.

Extreme Networks Technical Assistance Centers (TAC) provide 24x7x365 worldwide coverage. These centers are the focal point of contact for post-sales technical and network-related questions or issues. TAC will create a Service Request (SR) number and manage all aspects of the SR until it is resolved. For a complete guide to customer support, see the Technical Assistance Center User Guide at:

http://www.extremenetworks.com/go/TACUserGuide

The Extreme Networks eSupport website provides the latest information on Extreme Networks products, including the latest Release Notes, troubleshooting, downloadable updates or patches as appropriate, and other useful information and resources. Directions for contacting the Extreme Networks Technical Assistance Centers are also available from the eSupport website at:

https://esupport.extremenetworks.com

Registration

If you have not already registered with Extreme Networks using a registration card supplied with your product, you can register on the Extreme Networks website at:

http://www.extremenetworks.com/go/productregistration

Documentation

Check for the latest versions of documentation on the Extreme Networks documentation website at:

http://www.extremenetworks.com/go/documentation